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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,950	11/26/2003	Stephen Gold	100204110-1	9415
22879	7590	01/02/2008	EXAMINER	
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			ELMORE, REBA I	
		ART UNIT	PAPER NUMBER	
		2189		
		NOTIFICATION DATE	DELIVERY MODE	
		01/02/2008	ELECTRONIC	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JERRY.SHORMA@HP.COM  
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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/723,950	GOLD ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Reba I. Elmore	2189	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 27 August 2007.

2a)  This action is **FINAL**.                    2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

4)  Claim(s) 1-46 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5)  Claim(s) \_\_\_\_\_ is/are allowed.  
6)  Claim(s) 1-46 is/are rejected.  
7)  Claim(s) \_\_\_\_\_ is/are objected to.  
8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declarátion is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

1)  Notice of References Cited (PTO-892) 4)  Interview Summary (PTO-413)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948) Paper No(s)/Mail Date. \_\_\_\_.  
3)  Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.  
5)  Notice of Informal Patent Application  
6)  Other: \_\_\_\_.

## **DETAILED ACTION**

1. Claims 1-46 are presented for examination.
2. In view of the direction of the arguments of the appeal brief filed August 27, 2007, further consideration of the claim language has been required as this language has not been adequately defined within the disclosure, PROSECUTION IS HEREBY REOPENED. New rejections are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

- (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,
- (2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below.

### ***SPECIFICATION***

3. The objection to the title is *maintained*. The current title is vague to the point of not conveying any distinction of the current claimed present invention over any other data storage system or method. The title being proper because of its correspondence with the claim preambles does not meet the requirements for a title which includes the inventive concept of the

present invention. The Applicant has not invent a data management system, per se, an article of manufacture, per se, a data storage method, per se or an electrical system. These are nothing more than fields of endeavors or broad concepts already present in the public domain. None of these preambles encompass the inventive nature of the present invention and are therefore inadequate as a title. See 37 CFR 1.72(a) and MPEP § 606.

4. The objection to the specification not including information to the copending application is **withdrawn** due to the amendment.

5. The disclosure is objected to because of the following informalities: The summary of the invention is nothing more than a copy of claims 1, 21, 24 and 33 which does not meet the requirements for the content of the summary of the invention.

Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

Appropriate correction is required.

6. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***35 USC § 112, 1<sup>st</sup> Paragraph***

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 1-46 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

9. The written description persistently uses terminology which has not been adequately described. The claims and the specification refer to 'client protected computer systems', however, this terminology is only repeated in the specification and drawings without being defined. The specification also discusses protecting data as being separate and distinct from the protected client systems. This further confuses the use of the given terminology. The law requires that the written description be clear and precise as to how the Applicant performs such activities as those claimed. The specification uses terms which are not further defined, yet, these terms are essential subject matter as they are included in the claims. The concept of 'protected' has many different interpretations when used in conjunction with computers and therefore requires definition within the specification. The novelty of the present invention must be disclosed in such detail as to allow one of ordinary skill in the art to make and use the invention without undue experimentation. Such details for the actual inventive concepts have not been given in the present disclosure. Legal support for these reasons for a determination that the written disclosure is not adequate can be found in the recent US Court of Appeals for the Federal Circuit, *Automotive Technologies International, Inc., v. BMS of North America, Inc ...* (2006-1013,-1037).

***35 USC 112, 2<sup>nd</sup> Paragraph***

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 1-46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

12. The claims are indefinite because the terminology 'client protected computer system' has several implied meanings which raise the following questions:

- a. Is the client protecting the system (hardware) in some way or is the system limited as to uses by the client or is the software being limited as far as client usage or network access or accessibility?
- b. Is the 'client protected computer system' referring to security such as a firewall or some other type of system security?
- c. Since the specification is silent as to the meaning of this language and does not state how the protection applies to the system or the client the metes and bounds of the claim language cannot be determined.
- d.

***35 USC § 102***

13. The rejection of claims 1-36 as being anticipated by Wahl et al. is *maintained*. The Wahl reference has been applied with the understanding that different types of protection are taught. The data is protected, also the system is taught as being a SPARC environment which limits or protects the operating system from commands from other computer languages than

Solaris 2.X as well as prevents the secondary computer system from executing applications when the proper authority has not be established. Additionally, access to the mirror devices of the secondary computer system can be denied dependent upon the operational mode. All of these aspects of the Wahl reference are concepts directed toward protection within a computer system.

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. Claims 1-46 are rejected under 35 U.S.C. 102(b) as being anticipated by Wahl et el. (P/N 6,442,706).

16. Wahl teaches the invention (claims 1) as claimed including a data management system comprising:

a data storage system configured to store data of a plurality of client protected computer systems, wherein the data storage system comprises a plurality of storage devices individually having a respective capacity, and a quantity of the data of the protected computer systems to be stored exceeds capacities of individual storage devices as using a RAID system for back-up or mirror storage of database files (e.g., see col. 24, lines 5-24) the reference also discusses overflow conditions for memory elements which teaches the storage capacity being exceeded (e.g., col. 3, lines 24-37); and,

storage control circuitry coupled with the data storage system and configured to assign individual storage devices to store data for respective protected computer system (e.g., see col. 5, line 32 to col. 6, line 27 and col. 24, lines 5-24).

As to claim 2, Wahl teaches the storage control circuitry is configured to receive a

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request to add a new protected computer system and to assign one of the storage devices to implement data storage operations with respect to the new protected computer system as the network having more than one secondary computer system (e.g., see col. 6, lines 34-58).

As to claim 3, Wahl teaches the storage control circuitry is configured to monitor a status of at least one storage device and to assign a storage device for the new protected computer responsive to the monitoring as using throttles (e.g., see col. 15, lines 1-29).

As to claim 4, Wahl teaches the monitoring a processing capacity of an archive agent of at least one storage device as using a throttle which monitors percentages of central processing unit resources (e.g., see col. 15, lines 1-29).

As to claim 5, Wahl teaches the monitoring a storage capacity of a storage device as monitoring the capacity of the writelog (e.g., see col. 15, lines 1-29).

As to claim 6, Wahl teaches monitoring a status of a plurality of storage devices and assigning the storage device having a greatest available capacity as dynamically assigning disk storage space (e.g., see col. 3, lines 24-37).

As to claim 7, Wahl teaches entireties of the data for the protected computer systems are stored using respective assigned storage devices as a feature of the Qualix DataStar software which controls the data mirroring environment of the disk system (e.g., see col. 5, line 57 to col. 6, line 27).

As to claim 8, Wahl teaches the entireties of the data has a baseline data and associated delta data for the respective protective computer system as update data (e.g., see col. 9, lines 48-58).

As to claim 9, Wahl teaches the storage control circuitry is configured to assign a plurality of storage devices to store an entirety of the data for one of the protected computer

systems as mirrored data (e.g., see col. 10, line 62 to col. 12, line 20).

As to claim 10, Wahl teaches the storage control circuitry comprises a tracking database configured to store associations of the storage devices with respective protected computer systems (e.g., see col. 23, line 61 to col. 24, line 29).

As to claim 11, Wahl teaches the storage devices comprise disk storage devices (e.g., see col. 1, lines 12-67).

As to claim 12, Wahl teaches at least one storage device is configured to store data for a plurality of the protected computer systems (e.g., see col. 23, line 61 to col. 24, line 29).

As to claim 13, Wahl teaches the storage devices individually comprise an archive agent and a storage space as a secondary computer system and remote data mirroring system (e.g., see col. 8, lines 46-58).

As to claim 14, Wahl teaches the storage control circuitry comprises a master cell manager and at least one slave cell manager and wherein the master cell manager is configured to assign one of the protected computer systems to a storage device associated with at least one slave cell manager with the master cell manager being the primary mirror daemon and the slave cell manager being the remote mirror daemon (e.g., see Figure 1).

As to claim 15, Wahl teaches one of the storage devices is configured to transfer data for one of the protected computer systems to another storage device (e.g., see Figure 5).

17. Wahl teaches the invention (claim 16 and 38-46) as claimed including a data management system comprising:

plural means for storing electronic data, wherein individual ones of the plural means for storing comprise a respective data storage capacity as the data storage capacity of the primary storage system (e.g., see Figure 5);

means for communicating data intermediate to the plural storage means and a plurality of client protected computer systems, wherein a quantity of data of the client protected computer systems exceeds individual data storage capacities of individual means for storing as dynamically assigning memory space dependent upon overflow conditions (e.g., see col. 3, lines 24-54); and,

means for assigning individual ones of the means for storing to store data for respective client protected computer systems (e.g., see col. 3, lines 24-54).

As to claim 17, Wahl teaches the plurality means for storing individually comprise means for storing an entirety of the data for a respective client protected computer system (e.g., see Figure 1).

As to claim 18, Wahl teaches plural ones of the means for storing comprise means for storing an entirety of the data for a respective client protected computer systems (e.g., see col. 23, line 61 to col. 24, line 29).

As to claim 19, Wahl teaches a tracking means for storing information regarding associations of individual plural means for storing with respective client protected computer systems (e.g., see col. 23, line 61 to col. 24, line 29).

As to claim 20, Wahl teaches the plural means for storing individual archive means and physical storage means (e.g., see Figure 5).

18. Wahl teaches the invention (claim 21) as claimed including an article of manufacture comprising:

a processor-usable medium comprising processor-usable code configured to cause processing circuitry of storage control circuitry as the Qualix DataStar software which controls the data mirroring environment of the disk system (e.g., see col. 5, line 57 to col. 6, line 27) to:

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access information regarding a plurality of storage devices (e.g., see Figure 5);  
access information regarding a plurality of client protected computer systems (e.g., see col. 23, line 61 to col. 24, line 29);  
associated individual protected computer systems with respective storage devices (e.g., see col. 23, line 61 to col. 24, line 29);  
receive a request to add a new protected computer system (e.g., see col. 3, lines 24-37);  
monitor capacities of the storage devices (e.g., see col. 5, line 57 to col. 6, line 58); and,  
assign the new protected computer to a storage device responsive to the monitoring (e.g., see col. 5, line 57 to col. 6, line 58).

As to claim 22, Wahl teaches the processor-usuable code is configured to cause the processing circuitry to associate responsive to user input as utilizing a graphical user interface (e.g., see col. 15, lines 30-53).

As to claim 23, Wahl teaches the processor-usuable code is configured to cause the processing circuitry to associate responsive to the monitoring as using the macro language of throttles (e.g., see col. 15, lines 1-29).

19. Wahl teaches the invention (claim 24) as claimed including a data storage method comprising:

providing a plurality of storage devices configured to store data for a plurality of client protected computer systems, wherein the storage devices individually comprise processing circuitry and a storage space as using a RAID system for back-up or mirror storage of database files (e.g., see col. 24, lines 5-24);

monitoring capacities of individual storage devices as using throttles which monitor percentages of central processing unit resources (e.g., see col. 15, lines 1-29);

associating one of the protected computer systems with one of the storage devices responsive to the monitoring (e.g., see col. 15, lines 1-29); and,

implementing storage operations of the data for the associated protected computer system using the associated storage devices in accordance with the associating (e.g., see col. 24, lines 5-24).

As to claim 25, Wahl teaches a quantity of data of the protected computer systems to be stored exceeds individual capacities of individual storage devices (e.g., see col. 3, lines 24-37).

As to claim 26, Wahl teaches maintaining a record of the association of the storage device and one client protected computer system (e.g., see Figure 5).

As to claim 27, Wahl teaches the monitoring comprises monitoring storage capacities of the storage devices (e.g., see col. 15, lines 1-29).

As to claim 28, Wahl teaches the monitoring comprises monitoring processing capacities of the storage devices (e.g., see col. 15, lines 1-29).

As to claim 29, Wahl teaches the monitoring and assigning comprise monitoring and assigning using storage control circuitry (e.g., see col. 15, lines 1-29).

As to claim 30, Wahl teaches providing the storage control circuitry comprises a distributed control system (e.g., see col. 5, line 32 to col. 6, line 58).

As to claim 31, Wahl teaches associating a protected computer system with a storage device having a greatest available capacity as dynamically assigning disk storage space (e.g., see col. 3, lines 24-37).

As to claim 32, Wahl teaches transferring at least a portion of the data of a protected

computer system from the storage device to another storage device (e.g., see Figure 5).

20. Wahl teaches the invention (claim 33) as claimed including a data storage method comprising:

a plurality of storage devices configured to store data for a plurality of client protected computer systems, the storage devices individually comprising processing circuitry (e.g., see Figure 1);

storing the data using the storage devices (e.g., see Figure 1);

monitoring capacities of the storage devices using storage control circuitry as dynamically assigning disk storage space (e.g., see col. 3, lines 24-37);

providing a new storage device configured to store data for at least one of the protected computer system (e.g., see col. 23, line 61 to col. 24, line 64); and,

coupling processing circuitry of the new storage device with the storage control circuitry (e.g., see Figure 5).

As to claim 34, Wahl teaches monitoring capacity of the new storage device using the storage control circuitry after the coupling (e.g., see col. 15, lines 1-29).

As to claim 35, Wahl teaches monitoring processing capacities of the storage devices (e.g., see col. 15, lines 1-29).

As to claim 36, Wahl teaches monitoring storage capacities of the storage devices (e.g., see col. 15, lines 1-29).

### ***RESPONSE TO APPLICANT'S REMARKS***

21. Applicant's arguments filed August 27, 2007 have been fully considered but they are not persuasive. Parts of the claims are being argued in much greater detail than warranted by the actual claim language as well the reference is not being considered as a whole in teaching the

claimed limitations.

22. The Wahl reference is being misinterpreted by the Applicant's representative. The reference is directed toward either a LAN or WAN which protects data by mirroring the data. This means the networks have protected client systems to the extent claimed in the current application.

23. As to the storage capacity being exceeded in the claim language, this element is also taught to the extent required by the actual claim language. The limitation in the claims state only that a storage capacity can be exceeded and does not give further details concerning this element.

24. As to the 'assigning of individual ones of the individual storage devices to store data for respective ones of the protected computer systems', this element is also taught to the extent actually claimed. As the reference teaches a networked system of computers with failure recovery for network remote data mirroring system data being automatically recovered at a local, primary, remote, and/or secondary computer system, the individual storage devices are assigned for the mirroring and updates to the individual system being mirrored or updated. This is discussed to the extent required by the claim language in the summary of the invention of the reference.

25. As to the reference not teaching specific elements of the claims, the claimed elements are described in the specification as being any hardware, software or combination of hardware and software. The reference teaches the concepts of the claimed elements along with the method steps for managing data so that the data is protected and maintained.

26. Additional rejections have been given, therefore this office action is not final.

### ***CONCLUSION***

27. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Reba I. Elmore, whose telephone number is (571) 272-4192. The examiner can normally be reached on Monday and Thursday from 7:30am to 6:00pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the art unit supervisor for AU 2189, Reginald G. Bragdon, can be reached for general questions concerning this application at (571) 272-4204. Additionally, the official fax phone number for the art unit is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Tech Center central telephone number is (571) 272-2100.



Reba I. Elmore  
Primary Patent Examiner  
Art Unit 2189

Wednesday, December 12, 2007



MANO PADMANABHAN  
TC 2100